Apple Technician Guide

iPod nano

iPod nano (6th generation)

Updated: 2011-03-04

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iPod nano

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Manual Updates

4 March 2011

- Added changes for software update version 1.1 reflecting new functionality
- Added procedures for Recovery Mode Restore

Overview:

- Added procedure to turn on or off iPod
- Added link to Knowledge Base article **iPod nano (6th generation): Software update version 1.1 changes** http://support.apple.com/kb/HT4531

General Troubleshooting:

- Added link to Knowledge Base article **iPod nano (6th generation): Software update version 1.1 changes** http://support.apple.com/kb/HT4531

iPod Field Service Keys:

- Added "turn on" procedure to quick fixes.

Troubleshooting Functions:

- Added "turn on" and "Recovery Mode Restore" in Troubleshooting Functions Chart
- Added procedures for Recovery Mode Restore

Symptom Charts:

- Added "turn on" as a step in Quick Fixes chart and in the Quick Check for No Power / Dead Unit symptom

Introduced 8 September 2010

Feedback

We want your feedback to help improve this and future Technician Guides!
Please email any comments to: smfeedback5@apple.com

Apple Technician Guide

Basics

iPod nano

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Overview

iPod nano (6th generation) features a new product design with Multi-Touch display and includes Volume and Sleep/Wake buttons.

Some service related changes from the previous nano include:

- No camera.
- Video is not supported.
- Image on display no longer rotates when iPod is turned; accelerometer is now used for Shake to Shuffle and Fitness.
- Gestures are used to navigate to different screens and to turn screen orientation.
- No internal speaker.
- Tapping the Sleep/Wake button turns the display on or off, it does not turn off the iPod.
- Holding down the Sleep/Wake button for several seconds turns the iPod off completely, or on, if it is off. See **iPod nano (6th generation): Software update version 1.1 changes** http://support.apple.com/kb/HT4531
- VoiceOver works differently, by describing aloud each element on the screen as it is selected Refer to the iPod nano (6th generation) **user guide** for instructions and gestures used.

See Identifying iPod models: **http://support.apple.com/kb/HT1353**

iPod nano At-A-Glance

The iPod controls and ports are referred to throughout these procedures. Use the graphic below to familiarize yourself, and refer back as needed.

Minimum System Requirements

Mac:

- Mac computer with USB 2.0 port
- Mac OS X v10.5.8 or later
- iTunes 10 or later

Windows:

- PC with USB 2.0 port
- Windows 7, Windows Vista, XP Home or Professional with Service Pack 3
- iTunes 10 or later

What You Need/Tools

For iPod testing, you should update to the latest versions of all OS and iTunes software.

- Software Update... can be used to install the latest Mac OS and iTunes updates
- iTunes is available for download at: **http://www.apple.com/itunes/download/**
- Refer to the iPod Testing Station Setup document at **http://service.info.apple.com/ipod-tp.html** for a complete list of computer and accessory needs

Useful Resources

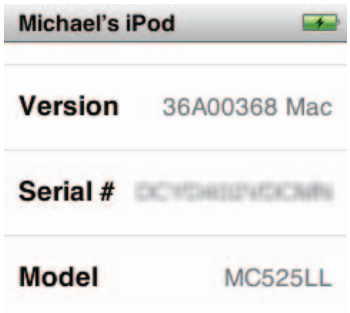
- **iPod nano (6th generation): Software update version 1.1 changes** http://support.apple.com/kb/HT4531
- **iPod nano (6th generation): Hardware troubleshooting** http://support.apple.com/kb/TS3474
- **iPod nano (6th generation) Tech Specs** http://www.apple.com/ipodnano/specs.html
- **All iPod nano Tech Specs** http://support.apple.com/specs/#ipodnano
- **iPod nano Product Page** http://www.apple.com/ipodnano/ —Explains iPod nano features and technology.
- **iPod nano Support Page** http://www.apple.com/support/ipodnano/ —Offers information, guides, assistants, and troubleshooting tips for iPod nano support topics.
- **iPod nano User Guides** http://support.apple.com/manuals/#ipodnano —Contains easy to access, in-depth usage instructions for iPod nano features and settings.
- **iTunes "How-to" page** http://www.apple.com/itunes/how-to — For syncing and other iTunes topics

Serial Number Locations

There are several ways to get the serial number of the iPod nano.

1. The serial number is printed along the top of the tooth on the clip.

2. (If the iPod nano is operational) From the Home screen, swipe left and tap Settings, then tap About.



3. In iTunes, from the iPod Summary tab.

Note: You can choose Edit > Copy to put the serial number on the Clipboard.

Identifying iPod nano by Configuration Code or Model Number

iPod nano (6th generation) **configuration code** (the last four characters of the serial number) can be used to identify the model type, color and capacity.

The **model number** (Model No.) is listed on the back of the iPod.

Use the table below to precisely determine which model is being serviced.

iPod nano (6th generation) Model Number and Configuration Codes		
	Model No. A1366	
Color	**8GB**	**16GB**
Silver	DCMN	DCMP
Graphite	DDVX	DDW4
Blue	DDVY	DDW5
Green	DDW0	DDW6
Orange	DDW1	DDW7
Pink	DDW2	DDW8
Red	DDW3	DDW9

Note About Images In This Guide

Screen shots and other graphics are for illustration purposes only and may not show current or observed dialog boxes, wordings, values, versions, models, capacities, and may be for a different model than you are testing. However the steps and sequences are the same unless noted.

Apple Technician Guide

Troubleshooting

iPod nano

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General Troubleshooting

Update System Software

Important: Whenever possible before beginning troubleshooting, ensure the latest software updates have been applied.

Troubleshooting References

- **iPod nano (6th generation): Software update version 1.1 changes** http://support.apple.com/kb/HT4531
- **iPod nano (6th generation): Hardware troubleshooting** http://support.apple.com/kb/TS3474
- **iPod nano Support Page** http://www.apple.com/support/ipodnano/ —Offers information, guides, assistants, and troubleshooting tips for iPod nano support topics.

Safety First

- Do not perform troubleshooting if there is a concern for yours or the customer's safety. You should also inform the customer of the issue.
- If a safety issue is discovered, follow the documented safety procedures and escalate the issue.
- Such issues could be due to glass fragments from a broken display, or overheating, or fumes, etc.
- Safety for test equipment should also be observed by checking ports for contamination, debris or corrosion before connecting.
- Warranty and service options may still apply.

What You Need

Also refer to the following important documents and other resources available on the iPod Testing Procedures Web page at: http://service.info.apple.com/ipod-tp.html

- iPod Testing Station Setup manual (How to set up a computer test station for iPod testing.)
- iPod Visual & Mechanical Inspection (VMI) manual

Customer's Setup and Reported Issue

1. Try to determine the customer's computer setup and whether their software is up-to-date.
2. Try to observe or verify the issue reported by the customer so that its resolution can be confirmed.

Visual Inspection

A visual inspection is performed to protect test cables and identify external causes that may affect warranty coverage.

Use the iPod Visual & Mechanical Inspection document, available from http://service.info.apple.com/ipod-tp.html, which inlcudes:

- Liquid Contact Indicator inspection
- Debris or corrosion inspection and examples
- Warranty classifications
- Photo examples of damage

Liquid Contact Indicator

iPod nano includes a liquid contact indicator (LCI) at the bottom of the headphones port. For instructions about what to do if an LCI is activated, refer to the iPod Visual & Mechanical Inspection document at http://service.info.apple.com/ipod-tp.html.

Battery Charging Complaint

For iPod nano with a battery charging complaint, see "Battery Will Not Charge" symptom in the Symptoms Charts.

For Battery Life Testing

If only battery life testing will be performed, refer to the Battery Life Test section for requirements.

iPod Field Service Keys

The following is a summary list of high-value "key" procedures to help resolve iPod issues quickly and to help reduce unnecessary in-warranty replacements.

Refer to separate headings in this guide and other referenced documents for more details about the procedures in this list.

Notes:

- **Important:** Doing a Restore is a priority. A restore can fix software issues, as well as issues that appear to be hardware related.
- Continue to provide excellent customer help by providing customer education on usage, settings, how to charge, normal function, etc.
- Attempt to observe or duplicate the reported issue so that the fix can be verified.
- Try to resolve the issue regardless of the iPod's warranty status.
- Generally, check for damage that may affect warranty status *after* attempting to resolve the issue.

1. **Inspect** the dock connector port and the headphone jack
    - Check for debris, corrosion, liquid, or other contamination — clean if possible.
    - Do not connect test cables to contaminated or damaged ports as they may contaminate or damage the test cables.
2. **Quick fixes**
    - *Turn on* (Hold down the Sleep/Wake button for several seconds to turn on the iPod. (This functionality applies to software version 1.1 or later.))
    - *Reset* (Hold down the Sleep/Wake button and the Volume Down button for at least 6 seconds, until the Apple logo appears)
3. **Charge**, if needed (for at least 10 minutes)
    - Charging may be all that's needed to revive an iPod and resolve the issue.
4. **Restore** (sync test media, as necessary to test syncing, content issues, or functions)

    Important: This is an essential step that resolves many issues and must be done if possible before replacing any iPod under warranty. Attempt to perform a restore for all software and hardware malfunction issues.
5. **Check for damage** before in-warranty replacement
    - If the issue cannot be resolved, visually check for accidental damage that clearly caused the issue. Failure or malfunction caused by accidental damage or misuse is not covered by Apple's warranty.
    - Refer to the iPod Visual & Mechanical Inspection (VMI) manual for complete guidelines on how to inspect for damage and to identify in-warranty and out-of-warranty failures.

Troubleshooting Functions

Charge

The iPod must have a sufficient battery charge before proceeding with most troubleshooting. Also refer to the following article:

- About iPod Batteries: http://www.apple.com/batteries/ipods.html

Troubleshooting Functions Chart

Many troubleshooting procedures refer to these iPod nano functions. When troubleshooting, you can try these methods in the order listed, until the iPod nano returns to normal operation:

Also refer to the Quick Fixes chart.

iPod nano Function	Action
Turn on	Hold down the Sleep/Wake button for several seconds to turn on the iPod. (This functionality applies to software version 1.1 or later.)
Reset	Press and hold the Sleep/Wake button and the Volume Down button for at least 6 seconds, until the Apple logo appears.
Charge (for at least 10 minutes)	Charging may be all that's needed to revive an iPod and resolve the issue.
Reset All Settings	Settings > Reset Settings > Reset
Restore[1]	Normal restore with iTunes. (This restores the iPod OS and firmware.)
Recovery Mode Restore[1]	If unable to perform a normal restore, try a Recovery Mode restore.

[1] **Warning:** All data is erased from iPod nano, including songs, files, photos, and any other data. All iPod nano settings are restored to their original state.

Restore

A Restore with iTunes can fix many issues. Attempt to perform a restore for all software and hardware malfunction issues.

Restore Notes:

- A restore must be performed (if possible) and the issue again verified, before replacing an iPod under warranty.
- If you are unable to perform a normal restore, try a Recovery Mode Restore.
- **Important:** You must gain agreement from the customer to do a restore in case their iPod has data or media on it that has not been backed up.
- Warn the customer about the potential of data loss, and make sure the customer understands that restoring the iPod nano reinstalls the iPod software, all iPod nano settings are restored to their original state, and that all data and media are erased from the iPod, including:
  - files (if disk use has been enabled)
  - fitness data
  - voice memos
  - songs
  - photos
  - podcasts
- All data and media that is on their computer can be re-synced back onto their iPod when reconnecting to their computer.

Syncing Media Note:

- After performing a restore, media can be synced, as needed, to test syncing, and used to verify the proper function of the iPod.

Warning: Irreversible damage may occur if the iPod does not have enough charge to complete the entire restore process during any disconnects from power. Make sure the iPod has a sufficient charge.

To perform a restore on an iPod nano, do the following:

Note: If you are unable to perform a normal restore, skip to Recovery Mode Restore.

1. Launch the latest release of iTunes.
2. Connect iPod nano to the computer with a USB dock connector cable.
3. In iTunes, select iPod nano in the device list and click the Summary tab.

4. Click Restore and follow the onscreen instructions to complete the restore process.
5. Once the restore has completed the iPod restarts.
6. When the Setup Your iPod screen opens, continue with the instructions in the Media Sync Test heading, below.

Recovery Mode Restore

If you are unable to complete a normal restore, attempt to perform a recovery mode restore.

Important: See all "notes" under the Restore heading.

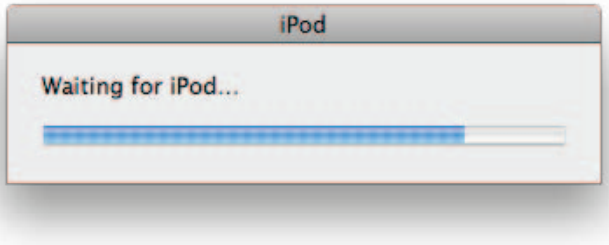
Warning: Irreversible damage may occur if the iPod does not have enough charge to complete the entire restore process during any disconnects from power. Make sure the iPod has a sufficient charge.

To perform a recovery mode restore on an iPod nano, do the following:

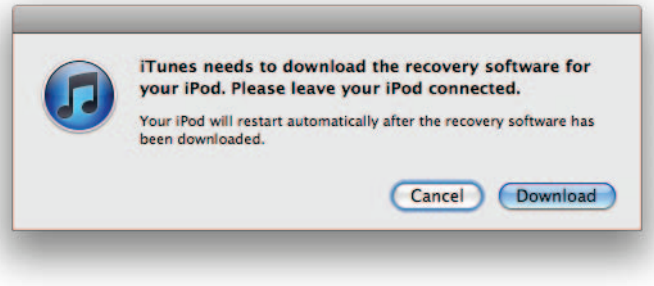
1. Launch the latest release of iTunes.
2. Connect iPod nano to the computer with a USB dock connector cable.
3. If the iPod nano displays in iTunes, select it in the device list and click the Summary tab.
4. Attempt to perform a normal restore, if not already attempted. If a normal restore was not successful, eject the iPod in the device list.
5. With the iPod still connected to the computer, press and hold the Volume Down and Sleep/Wake buttons simultaneously.
6. If you did not eject the iPod previously, you may get the following message screen. Continue to hold the buttons and ignore this for now, but select OK to close it at your convenience.

The disk was not ejected properly. If possible, always eject a disk before unplugging it or turning it off.
To eject a disk, select it in the Finder and choose File > Eject. The next time you connect the disk, Mac OS X will attempt to repair any damage to the information on the disk.
OK

7. The iPod will begin a reset progression.
8. Watch the computer screen. When you see the "Waiting for iPod..." progress bar window, release the buttons.



9. In a moment, you will see one of the following message windows. Click either Download or Continue (depending upon the window displayed).

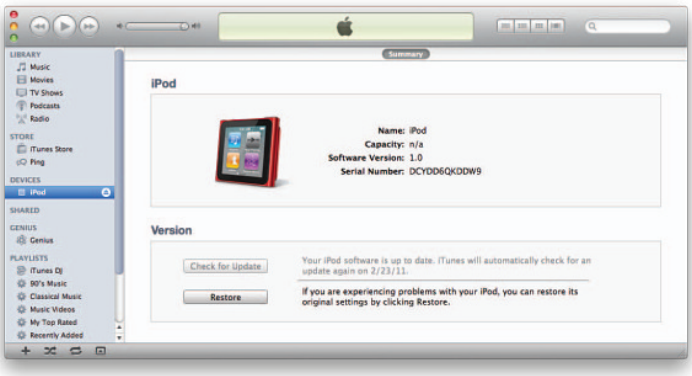

iTunes needs to download the recovery software for your iPod. Please leave your iPod connected.
Your iPod will restart automatically after the recovery software has been downloaded.
Cancel
Download

10. If you see the following or similar window, the buttons were held down too long. Click OK, then try the "press and hold the Volume Down and Sleep/Wake buttons" procedure again.

An iPod has been detected, but it could not be identified properly. Please disconnect and reconnect the iPod, then try again. An unknown error occurred (1621).
More Information
OK

11. If successful, you will see the following message window. Click OK.
Note: If you decide to NOT continue with the restore process, eject the iPod from iTunes and disconnect it from the computer, then perform a reset (press and hold the Volume Down and Sleep/Wake buttons until you see the Apple logo, then release the buttons).

12. In iTunes, select iPod nano in the device list. There should only be the Summary tab available. Click Restore and follow the onscreen instructions to complete the restore process.



13. Once the restore has completed the iPod restarts.

14. When the Setup Your iPod screen opens, continue with the instructions in the Media Sync Test heading, below.

15. **Important:** If you are unable to successfully complete a restore, perform a visual/mechanical inspection (VMI). (Refer to the iPod Visual and Mechanical Inspection document)
    - If the iPod passes the VMI, fail the iPod. **(AASP: failure code E06)**
    - If the iPod fails the VMI, deny warranty coverage and offer Out of Warranty Paid Service.

Tests

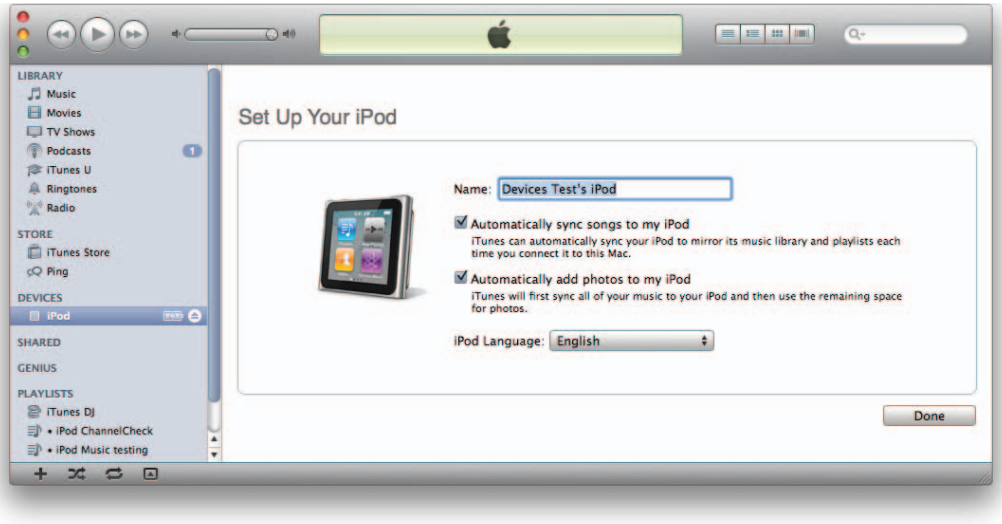
Media Sync Test (AASP: failure code E05)

This section tests syncing and loads the media, as desired, for later tests. It is based upon just completing the restore process and completing the steps in the iPod Testing Station Setup document from http://service.info.apple.com/ipod-tp.html.

For dedicated testing systems:

This method is for test computers that have only test media installed in iTunes and iPhoto.

1. In the "Set Up Your iPod" screen, make the check box selections below, to automatically sync songs and photos. Click Done.

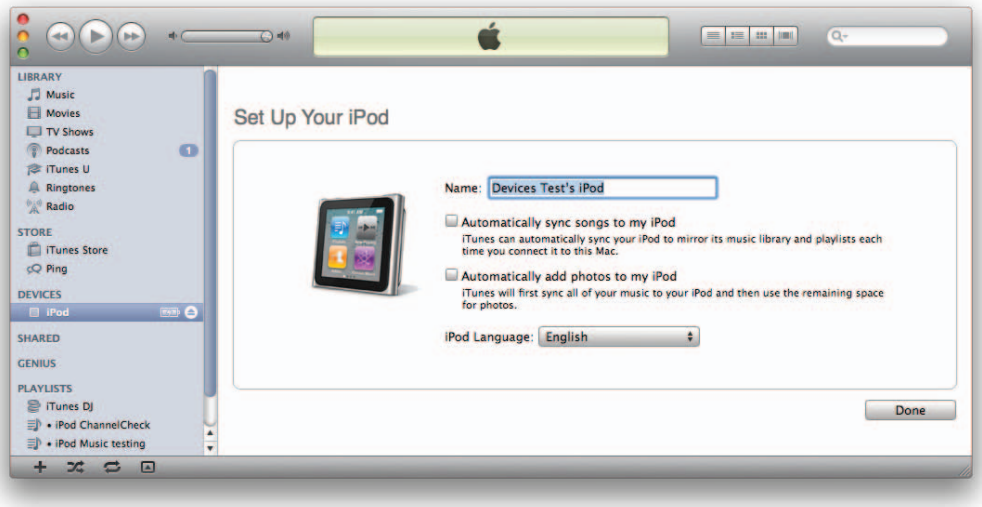


2. Wait for the "iPod sync is complete." message to appear in iTunes.

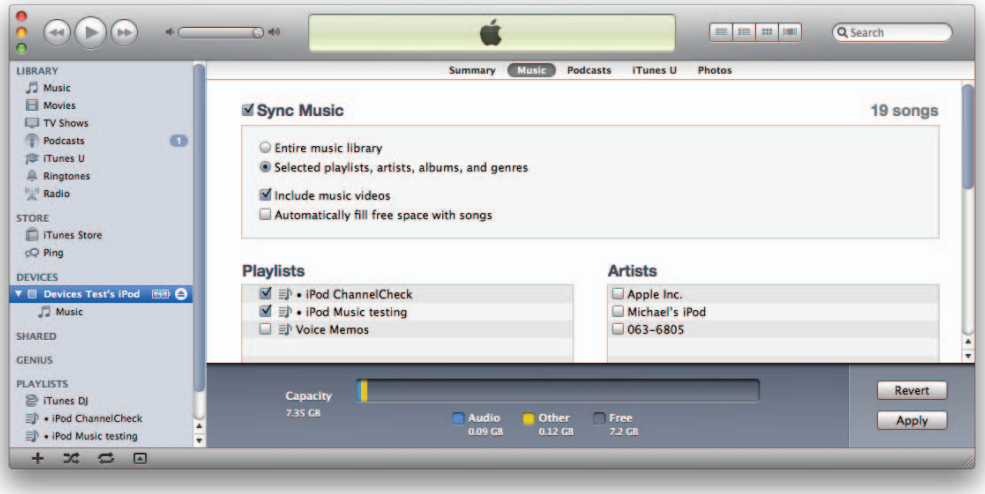
For non-dedicated testing systems:

This method is for test computers that have other media installed other than test media.

1. In the "Set Up Your iPod" screen, deselect all checkboxes so that music and photos will not sync. (Music and photos will be manually synced, later.) Click Done.



2. Select the Music tab, and make the selections shown below.



3. Select the Photos tab, and make the selections shown below.
4. Click Apply.

5. Wait for the "iPod sync is complete." message to appear in iTunes.

Eject the iPod

1. Eject the iPod, if necessary, by clicking the iPod eject icon in the source list.

2. Disconnect the iPod from the computer.

Battery Life Test

This test is only required for iPods with a customer complaint of short battery life.

iPod Battery Life Testing Policy:

An iPod under warranty with a battery life complaint qualifies to proceed to a battery life test, even if there is other evident damage, as long as the iPod does not have:

- excessive damage (broken or open enclosure, or in pieces)
- testing-prohibitive damage (dock connector damage or port corrosion)
- a cracked LCD or cover, unless it is a single hairline crack with no contributing damage.

If the iPod FAILS the battery life test, replace the iPod. **(AASP: failure code E03)**

If the iPod PASSES the battery life test,

- Return the iPod to the customer, unless there is another issue complaint, in which case, perform standard troubleshooting and visual inspection procedures (see iPod Visual and Mechanical Inspection document from **http://service.info.apple.com/ipod-tp.html**).

Battery Life Testing General Information:

Refer to the iPod Testing Station Setup document from **http://service.info.apple.com/ipod-tp.html** for tools, media, and computer setup, before beginning.

Important: For battery testing, a visual inspection, restore, and test-media sync must be performed, and a full battery charge must be performed just before starting a test. (Refer to the appropriate documents and heading for instructions.)

The playback test times required to pass are 100% of original published playback times. This includes all warranty coverage periods or programs, and so applies to each of the following:

- 1st year iPod warranty
- 2nd year iPod Apple Protection Plan coverage
- iPod Battery Replacement Program warranty

Use these specifications for battery life testing:

iPod Model:	Playback test time must be greater than or equal to this specification:
iPod nano (6th generation)	24 hours audio

Battery Life Testing: (AASP: failure code E03)

Restore and sync test-media just before charging for the test.

Important: Plan the start time of the tests carefully to ensure that the iPod will be checked at the times needed. The iPod is initially checked after the length of the playlist to verify that the Repeat All function is working, then checked again at the playback test time.

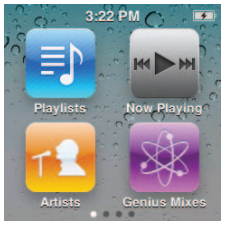
Charge the iPod

1. Before the test, connect the iPod to an Apple iPod USB power adapter.
2. Charge iPod nano for at least 4 hours. You should also see the charged battery icon, below, in the upper-right corner of the screen:

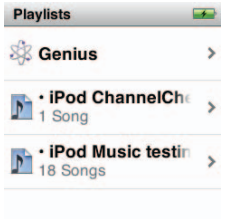
3. If after 5 hours the battery is not charged, fail the iPod.
4. Connect a set of headphones to the iPod and leave in place during the battery life test.

Start the music

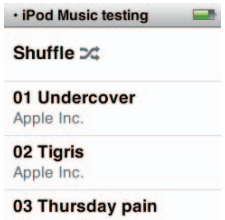
1. On the Home screen, tap the Playlists icon.



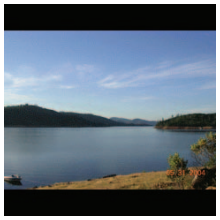
2. Select the iPod Music testing playlist.



3. Tap the first song in the playlist.

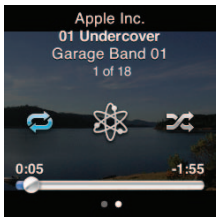


4. The album art for the song should display and the song should start playing.



5. Tap the album art to display the song controls. If the song is not playing, tap the play button.

6. Swipe left to reveal more controls. Tap the repeat icon once to highlight the "repeat all songs" icon (changes to blue when selected). (**Note:** Make sure the "repeat one song" icon is not displayed (indicated by a "1" displayed). If this happens, tap the icon two times to cycle to "repeat all songs.")



7. Check the scrubber bar to verify that the music is playing, then tap the Sleep/Wake button to lock iPod nano. (**Note:** Do not turn the iPod off. If you hold down the Sleep/Wake button, the iPod will turn off and music playback will stop.)
8. Let the iPod play past the length of the music playlist, then check that the iPod is still playing and that the playlist has started over (this is to verify that the "repeat all songs" function is working).
9. Recheck the iPod at the music playback test time.
10. If the iPod is still playing music, the battery is OK, and passes the test.
11. If the iPod has stopped playing because the battery depleted, fail the iPod.
    (AASP: failure code E03)

USB Charge Current Test (AASP: failure code E03)

Notes:

- This test does not require a restore before, or to verify results.
- Perform this test when the iPod has less than a 75% battery charge if possible. Do not perform this test if the battery is fully charged, as the test will not give usable results.

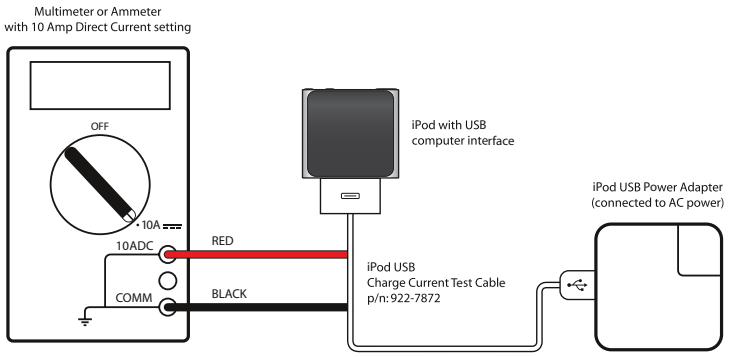
This test measures the current being received by the iPod from the USB adapter to determine whether the USB charging circuit is working properly.

Tools Required

- iPod USB Charge Current Cable (922-7872)
- Multimeter with a 10 Amp Direct Current setting (such as Caltek Instrument CM2400A)
- iPod USB power adapter

Setup

Connect the Charge Current Test Cable to the meter as shown, below.



Testing

Follow these instructions to avoid equipment damage.

1. Plug an Apple iPod USB power adapter to an AC power outlet.
2. Set the meter to measure 10 Amps Direct Current (DC)(10A ⎓).

   Important: Due to issues measuring milliamps on meters, do NOT use the milliamp (mA) setting, even if your meter has a milliamp selection.

   Note: 1A = 1000mA, 1mA = 0.001A
3. Connect the cable's dock connector plug to an iPod for testing and note the existing battery charge level on the iPod (see chart below)—passing meter readings depend upon the existing level of battery charge.

   Important: If the iPod does not have enough battery charge to boot, the screen will be blank. The battery charge can be assumed to be in the less than 75% category in the chart below. The iPod screen may continue to be blank, due to low battery charge, even if the iPod passes the test.

4. Put the iPod to sleep by tapping the Sleep/Wake button.
5. Read the meter.
6. Use the chart below to determine Pass/Fail.

Meter Readouts (in Amps) to Pass (with iPod in Sleep Mode)	
If battery charge is:	
Greater than 75 percent:	0.02A* (20mA) or higher = Pass
Less than 75 percent:	0.10A (100mA) or higher = Pass

* If the readout is 0.00 or 0.01, the reading is less than 0.02A (20mA), and the iPod fails.

Note: As the battery approaches fully charged, the charging current reduces dramatically.

- If the USB Charge Current Test fails, fail the iPod.
- If the iPod passes the test, continue testing.

After the test, turn the meter's selection dial to off to conserve the meter's battery power.

Sleep/Wake Test (AASP: failure code E02)

1. Tap the Sleep/Wake button to make the iPod nano display go to sleep. The screen will be blank.
2. Tap the Sleep/Wake button to wake iPod nano.

Touchscreen Function Test (AASP: failure code E02)

The Multi-Touch screen can be tested by using the controlling gestures.

1. From the Home screen, use two finger to rotate the screen.
2. Swipe left and tap the Photos icon to open the Photos Albums list and tap the iPod Slideshow album, then tap a photo to display it.
3. Double-tap the photo to zoom in.
4. Touch the photo and drag it all around the display, back and forth, up and down, to verify that all locations maintain movement of the photo.
5. Place two fingers on the photo and pinch them together, then apart, to verify that zooming out and in.

Note: Photos cannot be rotated.

LCD Screen Test (AASP: failure code E04)

This test uses solid color graphics files (Black, Blue, Green, Red, White) in the test media that is synced after a restore, to look for LCD screen defects.

During this test, make sure the LCD screen displays properly. Fail the iPod if you see any abnormal features such as lines, shadows, white spots, dark spots, any pixel defects (such as stuck, or bright, or dark pixels), or other defects.

Note: Photos do not rotate when the iPod nano is turned.

1. From the Home screen, swipe left and tap the Photos icon.
2. In the Photo Albums window, tap LCD Screen Test.
3. Tap the first photo. Double-tap the photo to zoom to full screen, if needed.
4. Inspect the display to ensure that there are no missing or stuck pixels, lines, or any defects.
5. Double-tap to zoom out if needed, then swipe left to the next color and double-tap to zoom to full screen, if needed, and inspect again.
6. Repeat this procedure for all colors to ensure that there are no missing or stuck pixels, lines, or any defects.
7. Touch and hold the last color screen to return to the Home screen.

Volume Buttons Test (AASP: failure code E02)

1. Connect headphones.
2. Play music and use the Volume buttons to adjust the volume up and down. Verify that audio is heard through the headphones.

Music Test (AASP: failure code E05)

(Use the test media synced after doing a restore.)

1. Connect headphones to the iPod, and orient the left and right sides correctly.
2. From the Home screen, tap the Playlists icon.
3. Select the "iPod ChannelCheck" playlist, then select the ipod_ChannelCheck audio file to begin play.
4. Make sure the left and right channel messages are heard on the appropriate side. Adjust volume if needed. Listen for any distortion.
5. To view the progress bar, if desired, tap the center of the screen where the music note icon is displayed (or where album art would be displayed).
6. Swipe right to go back to the Playlist screen and select the "iPod Music testing" playlist.
7. Tap the first song to start playing the songs.
8. Tap the screen to reveal the controls, then swipe left to view the progress bar.
9. Use the playhead slider to move to different points in the song to verify operation.
10. Use the volume buttons to vary the volume to verify operation.
11. Twist the headphones connector in the jack to verify that there is no static and the music does not pause. If so, fail the iPod.
12. Disconnect the headphones and view the playhead slider to verify that the playback paused. (AASP: failure code E02)
13. Reconnect the headphones, navigate to the song controls and press play to verify that the song plays.
14. Listen to the first song for about 5 to 10 seconds.
15. Swipe right to return to the controls window and press the Next button to play the next song, and play it for about 5 to 10 seconds.
16. Tap the screen to reveal the controls if needed, then press the Previous button twice to go back to the first song (the first press goes back to the beginning of the song). Play it for about 5 to 10 seconds.
17. Shake the iPod from side to side. A new song should start to play.

Photo and Slideshow Test (AASP: failure code E05)

(Use the test media synced after doing a restore.)

Note: The slideshow is tested in three ways: on the iPod nano screen, and from iPod nano with Composite output and Component output to a color TV.

On iPod nano:

1. From the Home screen swipe left and tap the Photos icon.
2. Tap the iPod Slideshow testing album.
3. Tap a photo to thumbnail to view the photo.
4. With your finger, drag the photo to the left to move to the next photo.
5. Double-tap the photo to zoom in where you tap.
6. Double-tap again to zoom out.
7. Use a two-finger pinch to zoom in (fingers together and move apart).
8. Use a two-finger pinch to zoom out (fingers apart and move together).
9. Tap the photo to reveal the photo controls, and press the "Play" button to start the slideshow.
10. Verify that the slideshow plays normally. **Note:** Photos do not rotate if the iPod nano is rotated.
11. Press the Home button to return to the Home screen.

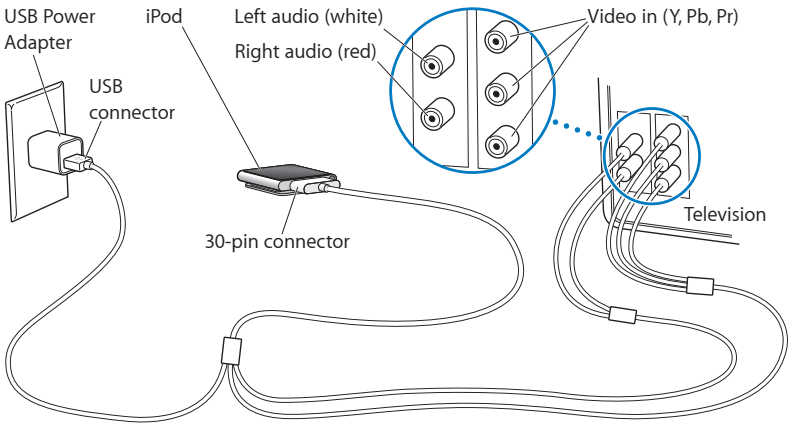
Slideshow output to a color TV:

Test each cable type: Apple Component AV Cable and the Apple Composite AV Cable.

1. Plug the green, blue, and red video connectors to the component video (Y, Pb, and Pr) input ports on the TV.

   For the Apple Composite AV cable, connect the yellow video connector to the video input port on the TV. The TV must have RCA video and audio ports.
2. Connect the white and red audio connectors to the left and right analog audio input ports on the TV.
3. Connect the 30-pin connector to the iPod nano or Universal Dock.

4. Connect the USB connector to an Apple USB Power Adapter or computer to keep your iPod nano charged.



5. Turn on the TV and set it to display from the input ports connected to iPod nano. (See the documentation that came with the TV if needed.)
6. If you need to verify that the broadcast standard on iPod nano is set to match the TV, from the Home screen swipe left and tap the Settings icon, then tap Photos. Tap TV Signal and set the TV Signal to PAL or NTSC. (Check the TV documentation if needed to determine which to use.)
7. Turn on the iPod and tap the Playlist icon then select the iPod Music Testing playlist and tap a song to begin play.
8. Touch and hold the iPod nano display to return to the Home screen.
9. Swipe left and tap the Photos icon.
10. Tap the iPod Slideshow photo album.
11. Tap a photo to display it. Tap the photo to reveal the controls. Press the slideshow play button.
12. Watch the slideshow for a few seconds and look for defects in the playback on the TV screen.
13. Verify that the audio from the TV speakers is undistorted.
14. Touch and hold on the iPod nano screen to return to the Home screen.
15. Tap the Now Playing icon, then press pause to stop the music.
16. Disconnect the cable from iPod nano. Repeat test for the other cable type.

Microphone/Voice Recording Test (AASP: failure code E05)

Voice recording in the iPod nano can be done through an external microphone, such as on headphones with a microphone. The "Voice Memos" icon is accessed by swiping left from the Home screen.

Follow these steps to test the voice recording capabilities:

1. Connect known good iPod Headphones with Mic.
2. Turn the iPod on and swipe left until you see the Voice Memos icon. Tap the icon to reveal the VU meter screen.
3. Tap the record button to start recording.
4. Speak into the microphone for four to five seconds and watch the VU meter to see if it registers the sound from the microphone.
5. Tap the stop button to stop recording.
6. Tap the voice memos list icon and tap the just recorded memo.
7. Tap play, adjust the volume as needed, and listen through the headphones to verify the recording. Make sure there is no static or noise.
8. **Important:** Delete any test recordings before returning the iPod to the customer. Be careful to select only a test recording from the memos list, tap Edit, tap the edit icon then Delete.

FM Radio Test (AASP: failure code E05)

The iPod nano FM radio uses the earphones or headphones cord as the radio antenna. The earphones or headphones must be connected in order to receive an FM signal.

1. Connect headphones to the iPod.
2. Move to a location with known good radio reception.
3. From the Home screen, swipe left and tap the Radio icon.
4. Tap a scan button (tap the screen to display if needed) to scan for a station or drag your finger along the radio dial to manually go to a popular station with a strong radio signal.
5. Check that the radio quality is clear with no noise or distortion in the audio.
6. From the controls screen, swipe left to reveal the Live Pause controls. Tap the pause button to verify that the station pauses.
7. Unplug the headphones and a message "No Radio Signal, Please plug in headphones for radio reception" appears.
8. Tap the screen to go to the Radio controls and tap the stop button.
9. Touch and hold the screen to return to the Home screen.

Symptom Charts

Follow steps in the order indicated below until the issue is resolved. Retest iPod to verify the issue is resolved.

Quick Fixes

Perform quick fixes when possible to resolve issues. Use appropriate procedures in the Tests section to verify the issue has been resolved.

Quick Fix Procedures	Action
Customer information	Some issues can be resolved with customer education and help, such as understanding normal function, quick fixes, battery life tips, or settings that can improve performance.
Turn on	Hold down the Sleep/Wake button for several seconds to turn on the iPod. (This functionality applies to software version 1.1 or later.)
Reset	Press and hold the Sleep/Wake button and the Volume Down button for at least 6 seconds, until the Apple logo appears.
Charge (for at least 10 minutes)	Charging may be all that's needed to revive an iPod and resolve the issue.
Reset All Settings	Settings > Reset Settings > Reset

See the Troubleshooting Functions Chart for a complete list of procedures, including restore methods

Booting/Power Issues

No Power / Dead Unit

Quick Check

Symptom	Quick Check
• Will not power on • Screen remains dark • Non-operational • Unable to reset	**1.** Try the following **Quick Fixes**: • Hold down Sleep/Wake button to turn on (Also see "**Button Issues**") • Reset **2.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	Connect the iPod to a known good power adapter to charge for up to 10 minutes. Go to step 3.	
	No	Go to step 6.	
3. iPod wakes or shows low-battery icon after 10 seconds.	Yes	Continue to charge for up to 10 minutes.	
	No	Go to step 4	
4. Reset (while connected to the power adapter).	Yes	Fixed? Return iPod to customer. .	
	No	Go to step 5.	

5. Restore • Sync media if needed for testing	Yes	Fixed? Return iPod to customer. If no, go to step 6.	
	No	Go to step 6.	
6. Is issue caused by accidental damage? • Refer to iPod Visual & Mechanical Inspection document.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E07** **E01**

Will Not Power Off

Quick Check

Symptom	Quick Check
• Will not power off	**1.** Verify issue. **2.** Try the following Quick Fixes: • Hold down Sleep/Wake button to turn off (Also see "Button Issues") • Reset **3.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to Step 2.	

2. Able to connect a known good USB cable to iPod.	Yes	Connect the iPod to a test computer and open iTunes. Go to step 3.	
	No	Go to step 4.	
3. Restore	Yes	Fixed? Return iPod to customer. If no, go to step 4.	
	No	Go to Step 4	
4. Is issue caused by accidental damage? • Refer to iPod Visual & Mechanical Inspection document.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E02** **E01**

Frozen on Apple Logo

Quick Check

Symptom	Quick Check
• Screen is unresponsive and displays Apple logo	**1.** Try the following Quick Fix: • Reset **2.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code

1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to Step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	Charge for up to 10 minutes with a USB power adapter. Go to step 3.	
	No	Go to step 5.	
3. Charging fixed?	Yes	Verify normal function. Return iPod to customer.	
	No	Connect the iPod to a test computer and open iTunes. If iPod mounts in iTunes, go to step 4. If iPod does not mount in iTunes, go to step 5.	
4. **Restore**	Yes	Fixed? Return iPod to customer. If no, go to step 5.	
	No	Go to Step 5	
5. Is issue caused by accidental damage? • Refer to **iPod Visual & Mechanical Inspection document**.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E04** **E01**

Freezes, Unexpected Restarts, Irregular Behavior or Power Off's

Quick Check

Symptom	Quick Check
• Freezes • Unexpected restarts • Irregular behavior • Unexpected power off's	**1.** Try the following **Quick Fixes**: • Reset **2.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	If needed, connect the iPod to a known good power adapter to charge for up to 10 minutes. Go to step 3.	
	No	Go to step 6.	
3. iPod shows low-battery icon after 10 seconds.	Yes	Continue to charge for up to 10 minutes.	
	No	Go to step 4	
4. Reset.	Yes	Go to step 5.	
	No	Go to step 5.	
5. Restore • Sync media if needed for testing	Yes	Fixed? Return iPod to customer. If no, go to step 6.	
	No	Go to step 6.	
6. Is issue caused by accidental damage? • Refer to iPod Visual & Mechanical Inspection document.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E07** **E01**

Battery Will Not Charge

Quick Check

Symptom	Quick Check
• Battery will not charge • Unit powers off when disconnected from a power source	**1.** Try the following Quick Fixes: • Reset **2.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	If iPod screen is blank and does not wake up or it will not turn on, connect it to a USB power adapter. If it does not wake after 3 minutes, fail the iPod. If it wakes, attempt to duplicate or verify the issue, then go to step 3.	**E07**
	No	Go to step 4.	
3. Perform a USB Charge Current Test.	Passed	Normal condition.	
	Failed	Go to step 4	

4. Is issue caused by accidental damage? • Refer to **iPod Visual & Mechanical Inspection document**.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E03** **E01**

Battery Run Time Too Short

Quick Check

Symptom	Quick Check
• Battery runs out of power very quickly • Short play time • Short battery life • Does not hold charge	**1.** Refer to the iPod Family battery page (**http://www.apple.com/batteries/ipods.html**) for iPod battery information and battery life tips. **2.** Make sure latest software is installed. **3.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to step 2.	
2. Is the latest iPod software installed on the iPod?	Yes	Go to step 3.	
	No	Updating to the latest software may fix this issue. Go to step 3 to update iPod software or perform a restore and sync for a battery life test.	

3. Able to connect a known good USB cable to iPod.	Yes	Update iPod software if needed, and only if acceptable to not perform a battery life test. Otherwise, perform a restore, media sync, and a **battery life test**. Go to step 4.	
	No	Go to step 5.	
4. iPod passed battery life test?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to step 5.	
5. Is issue caused by accidental damage? • Refer to **iPod Visual & Mechanical Inspection document**.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E03** **E01**

Uncategorized Symptom

Quick Check

Symptom	Quick Check
• Unable to locate appropriate symptom code	Verify whether existing symptom code applies to the issue reported by the customer. If not, document reported symptom and send feedback to **smfeedback5@apple.com** stating that a suitable symptom code could not be found.

Input/Output Issues

iPod nano does not appear in iTunes or cannot sync

Quick Check

Symptom	Quick Check
• iPod nano does not appear in iTunes or cannot sync	On the test computer, if iPod nano appears in the iTunes source list, and if the Sync button is active, syncing should work on the customer's computer. If not: **1.** Verify the customer has the system requirements for iPod nano **2.** Customer should verify all cable connections from iPod to computer, and that the USB cable is connected to the computer or a powered USB 2.0 hub (not the keyboard). **3.** Customer should try a different USB port. **4.** Try the following **Quick Fixes**: • Reset **5.** Go to Deep Dive

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	If needed, connect the iPod to a known good power adapter to charge for up to 10 minutes. Go to step 3.	
	No	Go to step 6.	

3. iPod shows low-battery icon after 10 seconds.	Yes	Continue to charge for up to 10 minutes.	
	No	Go to step 4	
4. Open iTunes and connect the iPod to the test computer with the USB cable. • Does the iPod appear in the iTunes source list?	Yes	See Quick Check, above	
	No	Go to step 5.	
5. Restore • Sync media if needed for testing	Yes	Fixed? Return iPod to customer. If no, go to step 6.	
	No	Go to step 6.	
6. Is issue caused by accidental damage? • Refer to iPod Visual & Mechanical Inspection document.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E05** **E01**

Multi-Touch not functioning, or working intermittently

Quick Check

Symptom	Quick Check
• Multi-Touch not functioning, or working intermittently	**1.** Clean the screen with a microfiber polishing cloth. **2.** Verify that the issue is not caused by the customer using gloves, or attempting to use immediately after applying hand lotion, or by a protective film on the screen that is interfering with function. **3.** Try the following Quick Fix: • Reset **4.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to Step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	Connect the iPod to a test computer and open iTunes. Go to step 3.	
	No	Go to step 4.	
3. **Restore**	Yes	Fixed? Return iPod to customer. If no, go to step 4.	
	No	Go to Step 4	
4. Is issue caused by accidental damage? • Refer to **iPod Visual & Mechanical Inspection document**.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E04** **E01**

No audio through headphones

Quick Check

Symptom	Quick Check
• No audio through headphones	**1.** Verify the music or audio is not paused. **2.** Check the volume setting. Adjust the volume by pressing the Volume buttons. **3.** Try another song or audio file. **4.** If headphones are connected, unplug and reconnect them. **5.** Check the Volume Limit setting (Settings > Music > Volume Limit) **6.** Do the following **Quick Fixes**: • Reset **7.** Try known good headphones. **8.** Go to Deep Dive

Deep Dive

Check	Result	Action	Code
1. Check headphones port for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect headphones cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to step 2.	
2. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 3. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to Step 3.	

3. Able to connect a known good USB cable to iPod.	Yes	Connect the iPod to a test computer and open iTunes. Go to step 4.	
	No	Go to step 5.	
4. Restore	Yes	Fixed? Return iPod to customer. If no, go to step 5.	
	No	Go to Step 5	
5. Is issue caused by accidental damage? • Refer to iPod Visual & Mechanical Inspection document.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E04** **E01**

Uncategorized Symptom

Quick Check

Symptom	Quick Check
• Unable to locate appropriate symptom code	Verify whether existing symptom code applies to the issue reported by the customer. If not, document reported symptom and send feedback to smfeedback5@apple.com stating that a suitable symptom code could not be found.

Display Issues

Display Anomalies

Quick Check

Symptom	Quick Check
• Pixel anomalies - missing, bright, stuck • Rainbow effect • No backlight • Poor image • Bad contrast • Horizontal/Vertical lines • White screen	**1.** Verify issue. **2.** Try the following Quick Fix: • Reset **3.** If issue only happens in one app: • Try multiple apps **4.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to Step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	Connect the iPod to a test computer and open iTunes. Go to step 3.	
	No	Go to step 4.	
3. Restore, for the following issues: • No backlight • White screen • Poor image	Yes	Fixed? Return iPod to customer. If no, go to step 4.	
	No	Go to Step 4	

4. Is issue caused by accidental damage? • Refer to **iPod Visual & Mechanical Inspection document**.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E04** **E01**

Touchscreen is not accepting input

Quick Check

Symptom	Quick Check
• Touchscreen is not accepting input	**1.** Clean the screen with a microfiber polishing cloth. **2.** Verify that the issue is not caused by the customer using gloves, or attempting to use immediately after applying hand lotion, or by a protective film on the screen that is interfering with function. **3.** Try the following **Quick Fix**: • Reset **4.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to Step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	Connect the iPod to a test computer and open iTunes. Go to step 3.	
	No	Go to step 4.	

3. Restore	Yes	Fixed? Return iPod to customer. If no, go to step 4.	
	No	Go to Step 4	
4. Is issue caused by accidental damage? • Refer to iPod Visual & Mechanical Inspection document.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E04** **E01**

Cracked LCD or Cover Glass

Quick Check

Symptom	Quick Check
• Cracked LCD • Cracked Cover Glass	**1.** Determine whether there is a safety issue, such a glass fragments. Do not perform procedures that can be a safety risk to you or the customer. **2.** Refer to iPod Visual & Mechanical Inspection document to determine if the damage is covered under warranty. **3.** Also refer to Hardware Warranties http://www.apple.com/legal/warranty

Uncategorized Symptom

Quick Check

Symptom	Quick Check
• Unable to locate appropriate symptom code	Verify whether existing symptom code applies to the issue reported by the user. If not, document reported symptom and send feedback to smfeedback5@apple.com stating that a suitable symptom code could not be found.

Control or Function Issues

Button Issues

Quick Check

Symptom	Quick Check
• Sleep/Wake button not working • Sleep/Wake button stuck or jammed • Volume buttons not working • Unable to reset	**1.** If Sleep/Wake button is stuck or jammed, see Special Conditions section of **iPod Visual & Mechanical Inspection document**. **2.** If buttons are damaged or missing, continue procedures if possible, otherwise go to step 4. **3.** Verify issue by attempting to: • Turn iPod off then on • Play music or audio • Adjust volume **4.** Try the following **Quick Fixes**: • Reset **5.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to Step 2.	
2. Able to connect a known good USB cable to iPod.	Yes	Connect the iPod to a test computer and open iTunes. Go to step 3.	
	No	Go to step 4.	

3. Restore	Yes	Fixed? Return iPod to customer. If no, go to step 4.	
	No	Go to Step 4	
4. Is issue caused by accidental damage? • Refer to iPod Visual & Mechanical Inspection document.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E02** **E01**

Cannot Reset

Quick Check

Symptom	Quick Check
• Cannot Reset	**1.** Verify issue. **2.** Try the following Quick Fixes: • Reset **3.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Go to Step 2.	

2. Able to connect a known good USB cable to iPod.	Yes	Connect the iPod to a test computer and open iTunes. Go to step 3.	
	No	Go to step 4.	
3. Restore	Yes	Fixed? Return iPod to customer. If no, go to step 4.	
	No	Go to Step 4	
4. Is issue caused by accidental damage? • Refer to iPod Visual & Mechanical Inspection document.	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**E01**
	No	Covered if under warranty Check for out-of-warranty repair option.	**E02** **E01**

Uncategorized Symptom

Quick Check

Symptom	Quick Check
• Unable to locate appropriate symptom code	Verify whether existing symptom code applies to the issue reported by the user. If not, document reported symptom and send feedback to smfeedback5@apple.com stating that a suitable symptom code could not be found.

How to Return iPod to Customer

Final Restore, Charge and Clean

If all tests show that the issue has been resolved or that the iPod is working normally, and if the iPod will be returned to the customer, a final restore procedure must be performed (to remove test media) and the iPod charged and cleaned, using the following procedures.

Windows PC restoring:

This step removes all media and data on the iPod and restores it for a Windows PC.

1. Refer to the Restore iPod Software procedures described earlier, to perform the following:
2. Launch the latest release of iTunes.
3. Connect the iPod to the USB 2.0 port on the computer.
4. Click Restore and follow the onscreen instructions to complete the restore process.
5. When the Setup Your iPod screen opens, eject the iPod.

Important: If you leave it connected to the computer until the Setup Assistant opens. Select Cancel, eject the iPod if necessary, and disconnect.

Mac restoring:

This step removes all media and data on the iPod and restores it, optimized for Mac.
Refer to the Restore iPod Software procedures described earlier, to perform the following:

1. Launch the latest release of iTunes.
2. Connect the iPod to the USB 2.0 port on the computer.
3. Select the iPod icon in the source list, if necessary, to display the iPod Summary screen, and click Restore.

4. Click Restore and follow the onscreen instructions to complete the restore process.
5. When the Setup Your iPod screen opens, eject the iPod.

Charge the Battery

If the tested iPod has passed all the tests so far, charge the battery before returning an iPod to a customer.

1. Power off the iPod to avoid activation during charging.
2. Connect an iPod power adapter to the iPod and charge it to at least a 75% charge on the battery level indicator.
3. If the iPod fails to charge or cannot reach a 75% charge level, fail the iPod.
(AASP: failure code E03)

Clean the iPod

To clean an iPod before returning it to a customer, unplug all cables and cords and power off the iPod. Use a soft, slightly damp, lint-free cloth, such as a microfiber cleaning cloth. Avoid getting moisture in openings. Do **NOT** use window cleaners, household cleaners, aerosol sprays, solvents, ammonia or products containing ammonia, or abrasives to clean iPod.